## What is claimed is:

## **CLAIMS**

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- 2 1. A method for managing an auction, comprising:
- 3 specifying an auction behavior; and
- specifying at least one rule for controlling when a bid may be placed
- 5 automatically for a bidder in the auction according to the specified auction behavior.
- 1 2. The method of claim 1, further comprising:
- automatically placing at least one bid for a bidder according to the at least one
- 3 rule and according to at least one specified bidding behavior.
- 1 3. The method of claim 2, wherein the specified bidding behavior comprises a
- 2 maximum bid and a minimum bid increment.
- 1 4. The method of claim 2, wherein automatically placing at least one bid for the
- 2 bidder comprises:
- if a highest bid in the auction is not from the bidder, placing the bid according to
  - 4 the at least one specified bidding behavior at a time according to the at least one rule.
  - 1 5. The method of claim 1, further comprising:
  - 2 receiving at least one bid placed automatically according to the at least one rule
  - and according to at least one specified bidding behavior.
  - 1 6. The method of claim 1, wherein specifying an auction behavior comprises
  - 2 determining the auction behavior according to information about the auction.
- 7. The method of claim 6, wherein the information about the auction comprises at
- 2 least one of information about an item, information about a seller and information about
- 3 bidders.

1	8.	The Method of claim 7, wherein determining the auction behavior comprises;
2 .		receiving information about one or more prior auctions, wherein each of the prior
3	auction	ns has an associated auction behavior;
4		identifying at least one of the prior auctions as similar to the auction based on the
5	inform	ation about the auction and the information about the one or more prior auctions;
6	and	
7		selecting one or more of the prior auctions identified as similar to the auction.
1	9.	The method of claim 8, further comprising selecting the auction behavior
2	associa	ated with the selected one or more prior auctions as the auction behavior.
1	10.	The method of claim 8, wherein identifying at least one of the prior auctions
2	similar to the auction comprises:	
3		comparing information about the auction to the information about the one or
4	more p	prior auctions using a metric to obtain a measure; and
5		comparing the measure to a threshold defining an extent of similarity.
1	11.	The method of claim 8, wherein the selected one or more prior auctions has a best
2	outcon	ne among the at least one of the prior auctions identified as similar to the auction.
1	12.	The method of claim 11, wherein a best outcome is at least one of a highest price
2	and a f	astest sale.
1	13.	The method of claim 1, wherein specifying at least one rule comprises:
2 .		associating at least one rule with at least one candidate auction behavior from
3	which	the auction behavior is specified; and
4		selecting the at least one rule associated with the specified auction behavior.

1 14. The method of claim 13, wherein associating at least one rule with each candidate 2 auction behavior comprises:

determining at least one rule that corresponds to each candidate auction behavior;

4 and

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storing the at least one rule in a database.

- 1 15. The method of claim 14, wherein determining at least one rule which corresponds
- 2 to each candidate auction behavior comprises:
- 3 characterizing each candidate auction behavior; and
- 4 selecting rules corresponding to the candidate auction behavior.
- 1 16. The method of claim 13, wherein a candidate auction behavior is a behavior of an
- 2 auction similar to the current auction.
- 1 17. The method of claim 1, further comprising:
- evaluating actual auction behavior according to bids received in the auction; and
- modifying the at least one rule for controlling when a bid may be placed
- 4 automatically in the auction according to the actual auction behavior.
- 1 18. The method of claim 17, wherein evaluating the actual auction behavior
- 2 comprises:
- characterizing the actual auction behavior according to bids received in the
- 4 auction;
- 5 comparing the selected auction behavior to the actual auction behavior.
- 1 19. The method of claim 17, wherein modifying the at least one rule comprises:
- 2 selecting at least one alternative rule corresponding to the actual auction
- 3 behavior.
- 1 20 The method of claim 19, wherein selecting the at least one alternative rule
- 2 comprises selecting the at least one alternative rule randomly from among a plurality of
- 3 rules.

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- 1 21. A system for managing an auction, comprising:
- 2 means for identifying an auction behavior; and
- means for identifying at least one rule for controlling when a bid may be placed
- 4 automatically for a bidder in the auction according to the selected auction behavior.
  - 22. A system for managing an auction, comprising:

2		an auction behavior selector providing an indication of a selected auction
3	beha	vior; and
4		a rule generator having an input for receiving an indication of the selected auction
5	beha	vior and an output providing at least one rule for controlling when a bid may be
6	place	d automatically for a bidder in the auction to encourage the selected auction
7	beha	vior.
1	23.	The system of claim 22, wherein the auction behavior selector comprises:
2		a comparator having an input for receiving the information about the at least one
3	prior	auction and information about the auction, and an output for providing an
4	indic	ation of at least one of the prior auctions similar to the auction;
5		a selector having an input for receiving the indication of one or more of the prior
6	aucti	ons identified as similar to the auction and an output for providing an indication of
7	the a	uction behavior associated with a selected one or more of the prior auctions.
1	24.	A computer program product comprising:
2		a computer readable medium; and
3		computer program instructions stored on the computer readable medium, wherein
4	the co	omputer program instructions, when executed by a computer, direct the computer to
5	perfo	rm a method for managing an auction, the method comprising:
6		selecting an auction behavior; and
7		specifying at least one rule for controlling when a bid may be placed
8	auton	natically for a bidder in the auction according to the selected auction behavior.
1	25.	A method for selecting an auction behavior for an auction, comprising:
2		receiving information about the auction; and
3		matching the information about the auction to an auction behavior.
1	26.	The method of claim 25, wherein matching the information about the auction to
2	the a	action behavior comprises:
3		receiving information about one or more prior auctions, wherein each of the prior
4	auctio	ons has an associated auction behavior;

- 5 identifying at least one of the prior auctions similar to the auction using the information about the auction and the information about the one or more prior auctions; 6 7 and selecting one or more of the prior auctions identified as similar to the auction.
- 27. The method of claim 26, further comprising selecting the auction behavior 1
- associated with the selected one or more prior auctions as the auction behavior. 2
- The method of claim 26, wherein identifying at least one of the prior auctions 28. 1
- similar to the auction comprises: 2
- comparing information about the auction to the information about the one or 3
- more prior auctions using a metric to obtain a measure; and 4
- comparing the measure to a threshold defining an extent of similarity. 5
- 29. The method of claim 26, wherein the selected one or more prior auctions has a 1
- 2 best outcome among the at least one of the prior auctions identified as similar to the
- auction. 3

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- 30. The method of claim 29, wherein a best outcome is at least one of a highest price 1
- 2 and a fastest sale.
- 31. The method of claim 25, further comprising: 1
- evaluating actual auction behavior according to bids received in the auction. 2
- The method of claim 31, wherein evaluating the auction behavior comprises: 32. 1
- characterizing the actual auction behavior according to bids received in the 2
- auction; and 3
- comparing the selected auction behavior to the actual auction behavior. 4
- The method of claim 32, further comprising determining whether to implement a 33. 1
- new rule if the auction behavior is substantially different from the selected auction 2
- behavior. 3

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2	34.	A system for selecting an auction behavior for an auction, comprising:	
3		means for accepting information about the auction; and	
4		means for comparing the information about the auction to a behavior.	
1	35.	A system for selecting an auction behavior for an auction, comprising:	
2		a behavior database in which associations between information about auctions	
3	and a	uction behaviors is stored; and	
4		a behavior selector having an input for receiving information about the auction	1
5	and a	n output for providing an indication of an auction behavior for the auction using	the
6	behav	vior database	
1	36.	A computer program product comprising:	
2		a computer readable medium; and	
.3		computer program instructions stored on the computer readable medium, when	eii
4	the co	omputer program instructions, when executed by a computer, direct the computer	r to
5	perfor	rm a method for selecting an auction behavior for an auction, the method	
6	comp	rising:	
7		receiving information about the auction; and	
8		matching the information about the auction to an auction behavior.	
1	37.	A method for specifying at least one rule for automatic bidding in an auction,	
2	comp	rising:	
3		receiving an indication of a selected auction behavior; and	
4		matching the auction behavior to the at least one rule to encourage the auction	
5	behav	vior.	
1	38.	The method of claim 37, wherein matching the auction behavior to rules	
2	comp	rises:	
3		associating at least one rule with at least one candidate auction behavior from	
4	which	the auction behavior is selected; and	
5		selecting the at least one rule associated with the selected auction behavior.	

- 1 39. The method of claim 38, wherein a candidate auction behavior is a behavior of an
- 2 auction similar to the current auction.
- 1 40. The method of claim 38, wherein associating at least one rule with each candidate
- 2 auction behavior comprises:
- determining at least one rule which corresponds to each candidate auction
- 4 behavior; and
- storing the selected rules in a database in manner accessible by an indication of
- 6 the candidate auction behavior.
- 1 41. The method of claim 40, wherein determining at least one rule which corresponds
- 2 to each candidate auction behavior comprises:
- 3 characterizing each candidate auction behavior; and
- selecting rules corresponding to the candidate auction behavior.
- 1 42. The method of claim 37, wherein the selected auction behavior differs from
- 2 actual auction behavior during the auction, the method further comprising:
- determining whether the selected auction behavior should be modified; and
- 4 modifying the at least one rule for controlling when a bid may be placed
- 5 automatically in the auction according to the actual auction behavior.
- 1 43. The method of claim 42, wherein modifying the at least one rule comprises:
- 2 selecting a rule corresponding to the actual auction behavior
- 1 44. The method of claim 43, wherein selecting a rule comprises selecting the rule
- 2 randomly from among a plurality of rules corresponding to the actual auction behavior.
- 1 45. A system for specifying a rule for automatic bidding in an auction, comprising:
- 2 means for accepting an indication of a selected auction behavior; and
- means for comparing the auction behavior to rules to encourage the auction
- 4 behavior.
  - 46. A system for specifying a rule for automatic bids in an auction, comprising:

2		a rule database in which associations between rules and auction behaviors are	
3	store	d; and	
4		a rule selector having an input for receiving an indication of a selected auction	
5	beha	vior and an output providing rules to encourage the auction behavior from the rule	
6	datab	pase.	
1	47.	A computer program product, comprising:	
2		a computer readable medium; and	
3		computer program instructions stored on the computer readable medium, wherein	
4	the co	omputer program instructions, when executed by a computer, direct the computer to	
5	perform a method for specifying a rule for automatic bids in an auction, comprising:		
6		receiving an indication of a selected auction behavior; and	
7		matching the auction behavior to rules to encourage the auction behavior.	
1	48.	A method for automatically placing a bid for an item for a bidder in an auction,	
2	comp	orising:	
3		determining whether a bid for the bidder may be accepted;	
4		applying a rule associated with the bidder and having a condition specifying	
5	when to place a bid; and		
6		if the condition of the rule is satisfied, and if a highest bid in the auction is not	
7	from	from the bidder, and if a bid for the bidder may be accepted, placing the bid according to	
8	a spe	cified bidding behavior.	
1	49.	The method of claim 48, wherein the condition is defined by information about	
2	the a	action.	

- 1 50. The method of claim 49, where the information about the auction includes at least
- one of a number of bids subsequent to a previous bid by the bidder and a period of time
- 3 elapsed since the previous bid by the bidder.
- 1 51. The method of claim 49, wherein the information about the auction includes at
- least one of information about bidders participating in the auction, information about

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- bidders registered for the auction, information about status of the auction, and 3 information about the item. 4
- 52. A system for automatically placing a bid for an item for a bidder in an auction, 1 2 comprising:

means for evaluating a rule associated with the bidder and having a condition 3 specifying when to place a bid; and 4

means, operative if the condition of the rule is satisfied and if a highest bid in the auction is not from the bidder and if a bid may be accepted for the bidder, for submitting the bid according to a specified bidding behavior.

- 53. A system for automatically placing a bid for an item for a bidder in an auction, comprising:
- a rule application engine having an output indicative of when to place a bid 3 according to a rule associated with the bidder and having a condition specifying when to place a bid; and

a bid generator, having a first input for receiving a specified bidding behavior and having an output for providing, when a time to place the bid arrives, an indication of a bid according to the specified bidding behavior if a highest bid in the auction is not from the bidder and if a bid may be accepted for the bidder.

- 54. A computer program product, comprising:
- a computer readable medium; and 2
  - computer program instructions stored on the computer readable medium, wherein the computer program instructions, when executed by a computer, directs the computer to perform a method for automatically placing a bid for an item for a bidder in an auction, the method comprising:
- 7 determining whether a bid for the bidder may be accepted;
- applying a rule associated with the bidder and having a condition specifying 8 when to place a bid; and 9
- if the condition of the rule is satisfied, and if a highest bid in the auction is not 10 11 from the bidder and if a bid for the bidder may be accepted, placing the bid according to a specified bidding behavior. 12

1	55.	A method for determining a behavior of an auction, comprising:
2		receiving information indicating bidding information for an auction;
3		determining at least one of an average time period between bids and an average
4	increm	nent between bids; and
5		storing the determined information as an associated auction behavior.
1	56.	A method for determining a beneficial auction behavior for an auction of an item,
2	compr	ising:
3		receiving information indicating an outcome and bidding information for a
4	plurali	ty of concluded auctions of similar items;
5		determining a behavior of each of the concluded auctions from the bidding
6	information:	
7		selecting the behavior of the auction having the best outcome as the beneficial
8	auction	n behavior.
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1	57.	A digital information product, comprising:
2		a computer-readable medium; and
3		information stored on the computer-readable medium and defining data
4	associa	ating each of one or more desired auction behaviors to one or more rules for
5	contro	lling when a bid may be placed automatically for a bidder in an auction.
1	58.	A digital information product defining a proxy bidder, comprising:
2		a computer-readable medium;
3		information stored on the computer-readable medium and defining data
4	associa	ating a maximum bid and a bidder with an indication of a rule for controlling when
5	a bid n	nay be placed automatically for a bidder in an auction.